Chapter 2

Troll

APPLE DISK
Apple II/II+/IIe/IIc
Applesoft, 48K

Micro Courseware

MATH CLASS LEVEL 4:

Advanced Addition & Subtraction

A TROLL LEARNING CENTER

This unit contains: 1 micro-software disk and a User's Guide.

A TROLL LEARNING CENTER

Troll Math Class is the ideal way to introduce students to basic math skills. **LEVEL 4: ADVANCED ADDITION & SUBTRACTION** focuses on advanced addition and subtraction skills.

Game-like activities use colorful animation and optional sound to help youngsters advance their math skills to include addition and subtraction of large numbers, decimals, and fractions; understanding place value; rounding and estimating.

THIS LEARNING CENTER CONTAINS:

- a MICRO-SOFTWARE program disk
- a User's Guide

TROLL ASSOCIATES
Mahwah, N.J. 07430

Math Class 4: Advanced Addition & Subtraction

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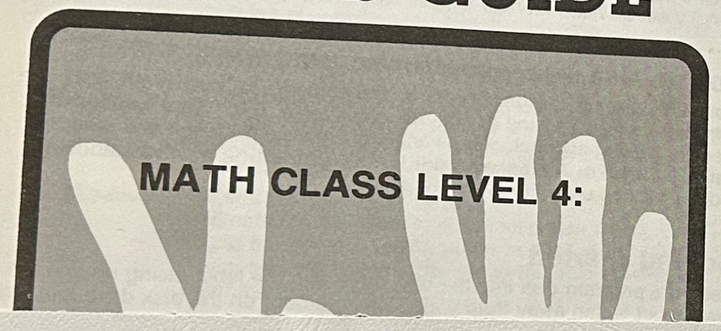
Troll MICRO

COURSEWARE

USER'S GUIDE



Chapter 2

Troll Math Class

Level 4:
Advanced
Addition & Subtraction

Troll COURSEWARE

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Fractions

Common Denominators

Objectives: Adding fractions with the same denominators.
Students work with halves, thirds, fourths, sixths, eighths, and ninths, adding fractions with like denominators to find sums up to 1.

Different Denominators

Objectives: Adding fractions with different denominators.
Students work with halves, thirds, fourths, sixths, eighths, ninths, and twelfths. First students find the lowest common denominator, then add the fractions to find sums up to 1.

Care of Disks

The micro-software program is recorded on the magnetic coating of the program disk, which is permanently sealed inside a protective cover. Do not touch the surface of the disk that is visible through the oval cutout in the protective cover. When the disk is not in use, it should be returned to its own envelope and stored in a safe place away from dust, magnetic fields, and temperature and humidity extremes. Do not bend, staple, or write on the disk or its protective cover with ball point pen or pencil.

Warranty

Troll Associates provides a lifetime guarantee on Troll micro-software disks. If any program disk is accidentally damaged or ever fails to load or run, simply return it to us for a free replacement.

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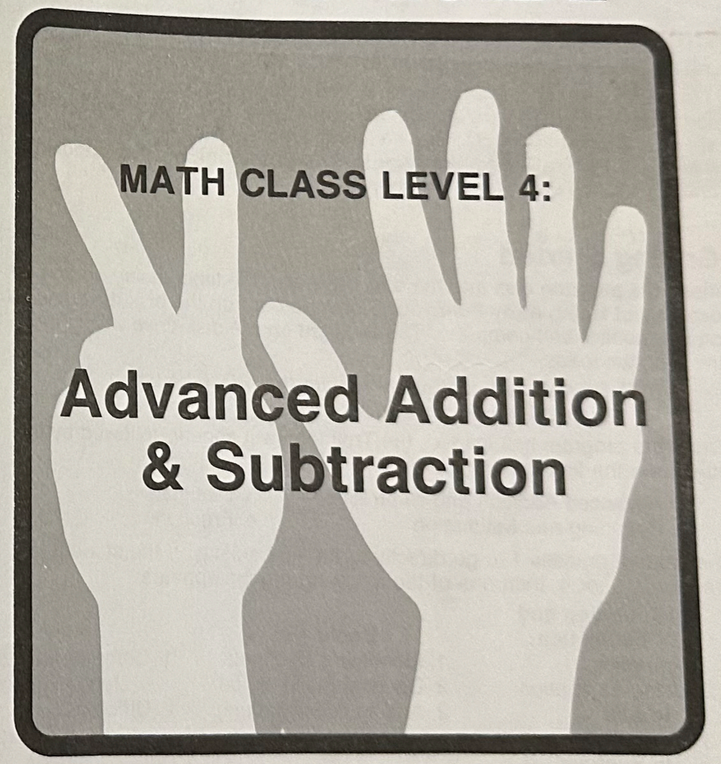
Troll MICRO

COURSEWARE
USER'S GUIDE



Troll Micro-Software

Troll Math Class
Level 4: Advanced Addition & Subtraction
Micro User's Guide

System Requirements

1. Apple IIGS, IIc, IIe, II+, or II (with Applesoft and at least 48K of RAM).
2. One disk drive.
3. A TV set or video monitor (color is recommended).

How to Use This Program

Troll Math Class is designed to introduce students to basic math skills in a format that is entertaining as well as educational. Each level focuses on a specific concept and includes a variety of activities to teach and reinforce that skill. **Level 4: Advanced Addition & Subtraction** practices addition and subtraction using large numbers.

Getting Started

Insert the program disk into the disk drive with the label facing up and the oval cutout facing away from you. Close the door on the disk drive and turn on the monitor and computer. The red light on the disk drive will light up as the program loads.

NOTE: Some Apple computers require that PR#6 be typed before the program begins loading.

When the program has loaded, the Troll logo will appear, followed by the title. Then the first menu appears:

1 Advanced Addition and Subtraction
2 Rounding and Estimation
3 Decimals
4 Fractions

The student presses 1 to go directly to the first activity. If the student presses 2, 3, or 4, then one of the following menus appears:

Rounding and Estimation	Decimals	Fractions
1 Rounding	1 Identifying Decimals	1 Common Denominators
2 Using Estimation to Add	2 Decimal Place Value	2 Different Denominators
3 Using Estimation to Subtract	3 Adding & Subtracting Decimals	

To choose an activity from the menu displayed, student simply presses the number of that choice.

Special Keys

	H	Help
CONTROL	X	Return to First Menu
CONTROL	O	Turn Sound On or Off

Advanced Addition & Subtraction

Advanced Addition & Subtraction
Objectives: Add and subtract large numbers.
Students find sums and differences of 4- and 5-digit numbers. After each correctly answered problem, students play one round of a space game.

Rounding and Estimation

Rounding
Objectives: Understand the process of rounding.
With the help of a number line, students learn to round numbers to the nearest ten, and to round up when a number is exactly in the middle.

Using Estimation to Add
Objectives: Estimate sums.
Estimate the weight of a space ship plus cargo. First round the cargo's weight to the nearest ten or hundred. Then, add the rounded weight to the ship's weight to estimate the new weight.

Using Estimation to Subtract
Objectives: Estimate differences.
Estimate the weight of a space ship less cargo. First round the cargo's weight to the nearest ten or hundred. Then, subtract the rounded weight from the ship's weight to estimate the new weight.

Decimals

Identifying Decimals
Objectives: Understand decimal notation.
In this activity, the student writes the decimal number for the colored portion of a set of squares.

Decimal Place Value
Objectives: Understand place value.
After students identify digits in the thousandths through hundred thousands places, the decimal point becomes the ball of an exciting game.

Adding and Subtracting Decimals
Objectives: Add and subtract numbers containing decimals.
Students find sums and differences of numbers with 1 to 3 decimal places. After each correctly answered problem, students play one round of a space game.